

CLAIMS

1. A radiation flux imaging system comprising:

5       non-imaging radiation detection means;  
position sensing means, to detect the position and orientation of said radiation  
detection means;  
processing means to process position and orientation data from said position  
sensing means, the presence or absence of contact from said contact sensing  
10      means and local radiation flux from said radiation detection means to determine  
the surface geometry of a surface to be imaged and the corresponding field of  
radiation flux; and  
display means, to display said geometry and radiation flux field to a user.

15     2. A system according to claim 1, further comprising contact sensing means, to detect  
contact of said radiation detection means with a surface to be imaged.

20     3. A system according to any preceding claim wherein said processing means further  
includes means to identify positions corresponding to inadequate data collection, and  
means to communicate those positions to a user, in use.

25     4. A system according to any preceding claim further comprising means to bias said  
radiation detection means away from a surface to be imaged, and processing means to  
calculate the depth of a radiation source below said surface to be imaged by comparison  
of the local radiation flux in the biased and unbiased positions.

5. A system according to any preceding claim further comprising means to mark the  
surface to be imaged.

30     6. A radiation flux imaging system substantially as described herein, with reference to  
and as illustrated by any appropriate combination of any accompanying drawings.

7. A system according to any preceding claim wherein the position sensing means comprises a plurality of position sensing means, fixed relative to each other, and the processing means further comprises means to compare the measured relative positions of the said plurality of position sensing means, thereby providing an identification of position measurement errors.
8. A system according to any preceding claim wherein the processing means identifies any radioactive source with an activity above a pre-set level and displays the position(s) of those/or that radioactive source(s) on the display means.

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9. A system as claimed in claim 8 wherein the pre-set level is determined by the processing means and is a proportion of the activity level from the radioactive source with the highest activity level.